

Comparisons of Job Characteristics

Focus Occupation: [Structural Metal Fabricators and Fitters \(51-2041\)](#)

Associated Occupation: [Plumbers, Pipefitters, and Steamfitters \(47-2152\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 81

Focus Occupation: Structural Metal Fabricators and Fitters (51-2041)
Associated Occupation: Plumbers, Pipefitters, and Steamfitters (47-2152)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Mechanical	6.8	17.0	8.6	<<	Extensive education and/or training may be required
Building and Construction	4.0	16.6	6.9	<<	Extensive education and/or training may be required
Design	5.2	11.2	10.3	0	Current knowledge level may be sufficient
Mathematics	9.2	11.0	8.7	<	Expanded education and/or training may be required
Physics	4.3	9.6	1.7	<<	Extensive education and/or training may be required
Engineering and Technology	5.7	9.1	6.2	<<	Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 73

Focus Occupation: Structural Metal Fabricators and Fitters (51-2041)
Associated Occupation: Plumbers, Pipefitters, and Steamfitters (47-2152)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Operation and Control	5.4	8.7	5.9	<<	Extensive development of skills in this area may be required
Quality Control Analysis	5.9	8.7	6.1	<<	Extensive development of skills in this area may be required
Repairing	3.4	8.4	1.7	<<	Extensive development of skills in this area may be required
Troubleshooting	4.5	8.4	4.8	<<	Extensive development of skills in this area may be required

Equipment Maintenance	3.5	7.5	1.9	<<	Extensive development of skills in this area may be required
Equipment Selection	3.3	6.0	2.5	<<	Extensive development of skills in this area may be required
Installation	1.7	5.5	2.0	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 87			
Focus Occupation: Structural Metal Fabricators and Fitters (51-2041) Associated Occupation: Plumbers, Pipefitters, and Steamfitters (47-2152)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Arm-Hand Steadiness	6.8	11.8	9.5	<	Some improvement in abilities may be required
Extent Flexibility	4.8	11.5	6.0	<<	Extensive improvement in abilities may be required
Visualization	7.5	11.2	10.1	<	Some improvement in abilities may be required
Finger Dexterity	7.6	11.1	8.0	<<	Extensive improvement in abilities may be required
Multilimb Coordination	6.0	11.1	7.4	<<	Extensive improvement in abilities may be required
Gross Body Equilibrium	3.2	8.0	4.1	<<	Extensive improvement in abilities may be required
Gross Body Coordination	3.9	7.4	4.3	<<	Extensive improvement in abilities may be required
Speed of Limb Movement	3.2	6.3	4.2	<<	Extensive improvement in abilities may be required
Spatial Orientation	2.7	5.8	1.9	<<	Extensive improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common		Similarity of Focus Occupation to Associated Occupation: 74
Focus Occupation: Structural Metal Fabricators and Fitters (51-2041) Associated Occupation: Plumbers, Pipefitters, and Steamfitters (47-2152)		
Work Activities	Exclusivity of Activity	
Adhere to safety procedures	12	
Build or repair structures in construction, repair, or manufacturing setting	54	
Determine project methods and procedures	76	
Direct and coordinate activities of workers or staff	3	
Examine products or work to verify conformance to specifications	15	

Fabricate, assemble, or disassemble manufactured products by hand	11
Identify base metals for welding	68
Move or fit heavy objects	8
Perform safety inspections in construction or resource extraction setting	46
Read blueprints	10
Read specifications	23
Read technical drawings	7
Understand construction specifications	53
Use acetylene welding/cutting torch	54
Use hand or power tools	2
Weld together metal parts, components, or structures	54

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 81

Focus Occupation: Structural Metal Fabricators and Fitters (51-2041)
Associated Occupation: Plumbers, Pipefitters, and Steamfitters (47-2152)

Tools and Technologies	Exclusivity
Computers	1
Content authoring and editing software	1
Cutting and crimping and punching tools	3
Cutting tools	18
Data management and query software	1
Earth moving machinery	11
Fastener setting tools	12
Finance accounting and enterprise resource planning ERP software	2
Forming tools	2
Holding and clamping tools	3
Indicating and recording instruments	2
Ladders and scaffolding	6
Length and thickness and distance measuring instruments	2
Lifting equipment and accessories	3
Machine tools	7
Marking tools	11
Measuring and layout tools	3
Metal bending and forming machinery	17
Power tools	2
Prying and bending tools	10
Rough and finishing tools	5
Soldering and brazing and welding machinery and supplies	6
Special tooling fixtures	16
Wrenches and drivers	2

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.